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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/799,358

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Peter R. Werp

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EXAMINER

WEATHERBY, ELLSWORTH

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/799,358

Applicant(s)

WERP ET AL.

Examiner

Ellsworth Weatherby

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/20/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☒ Other: WO 99/23934.

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments, see Arguments pg. 8/10-10/10, filed 1/25/2007, with respect to the rejection(s) of claim(s) 3-20,22 and 25-27 under Matsutani (USPN 4,875,485) in view of Creighton et al. (USPN 6,459,924) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Creighton et al. (WO 99/23934).

***Claim Rejections - 35 USC § 103***

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsutani (USPN 4,875,485) in view of Creighton et al. (WO 99/23934).

Matsutani '485 discloses a subject support (col. 3, lines 19-20); two magnet units disposed on opposite sides of an operating region such that they are collinear (figure 1, ref. 19 & 20), each magnet unit having a magnet having a positioner and a controller for coordinated movement about an operating region while maintaining a homogeneous support (col. 3, lines 20-44). Matsutani '485 also discloses a support for mounting the at least two magnet units adjacent to the operating region in the subject (col. 4, lines 51-60).

Matsutani '485 does not teach that the magnets are used to orient a magnetically responsive device. Matsutani '485 also does not disclose a positioner for changing the position of the magnet in the unit to change the net direction of the field while the field is

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applied by the at least two units. Matsutani '485 also does not disclose that the magnets are rotatable about the operating region in a transverse plane of the subject.

Creighton et al. '934 discloses a controllable pivot for changing the position of the magnet in the unit to change the net direction of the field while the field is applied by the at least two units to orient or navigate a magnetically responsive device (abstract).

Creighton et al. '934 also teaches having two magnet units (pg. 4), and wherein the magnet units have an arcuate support arm that permits rotation about the operating region in a transverse plane of the subject (figure 3B, ref. 54).

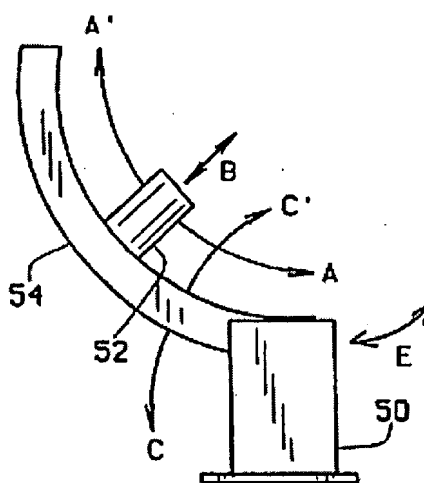


FIG. 3B

Creighton et al. '934 further teaches having two stanchions that are disposed on opposite sides of the patient support, each mounted with identical arcuate support arms, thus permitting rotation about a parallel axis (pg. 4).

It would have been obvious to modify the movable opposing magnet assembly of Matsutani '485 with the pivoting magnets in the arcuate support arms which are mounted on the two oppositely disposed stanchions as taught by Creighton et al. '934.

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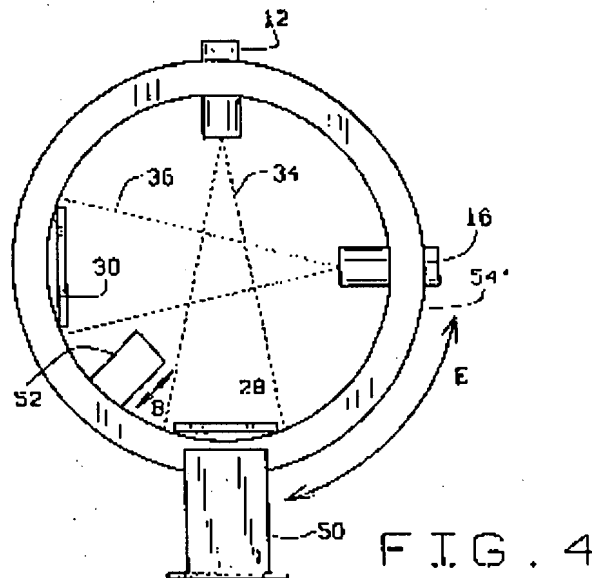
The motivation to do so would be to supply significant fields in all directions and all locations in an operating region of a patient.

3. Claims 5, 8-11, 19-20, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsutani '485 in view of Creighton et al. '934.

Regarding claims 5, 8-11, 19-20, 22 and 26, the modified invention of Matsutani '485 discloses the invention substantially as claimed except for the controller controlling the positioner of each magnet unit to adjust the positions of the magnets as the magnet units move to maintain the magnetic field direction to selectively orient a magnetically responsive device and the imaging system.

Creighton et al. '934 discloses: a controlling apparatus may be provided and coupled to articulation systems, the pair of axial coils, the articulation and rotation systems, as well as the imaging system (figure 4, refs. 16,30), as well as control current in a coil used as magnet (pg. 11). Furthermore, Creighton et al. '934 incorporates by reference robotic arm control in response to user input (pg. 9-10).

Creighton et al. '934 also discloses an imaging system (figure 4, refs. 16,30) comprising a movable support, an imaging beam source (ref. 16), an imaging beam receiver (ref. 28) and a controller for coordinating the movement of the imaging system and the magnets (pg. 9-10).



Creighton et al. '934 further discloses a controller that controls the positioners, and the strength and direction of the magnetic field in response to movement of the magnets (claim 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the modified moveable opposing magnet arrangement of Matsutani '485 to include the controller of Creighton et al. '934. The motivation to do so would be to allow for close coordination of magnetic surgery with concurrent imaging and would be particularly useful for surgery in sensitive areas of a patient's body such as the brain.

4. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsutani '485 in view of Creighton et al. '934 as applied to claims 19 above, and further in view of Ritter et al. (USPN 6,241,671).

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Matsutani '485 in view of Creighton et al. '934 teaches the invention substantially as claimed except for the imaging system and adjusting the strengths and positions of the magnets to maintain the magnetic field while accommodating movement of the imaging system. The modified invention also does teach the determination of the magnetic field applied by the magnet units being determined based upon a mathematical model or a lookup table.

Ritter et al '671 teaches a magnet assembly that can rotate about a longitudinal axis parallel to the longitudinal axis of a patient bed. The magnet assembly can preferably turn about 20 degrees in either direction. This movement helps prevent shading of the imaging beam in certain circumstances (cols. 8-9, lines 65-67 & lines 1-4). Ritter et al. '671 also teaches using a mathematical model written into a computer algorithm to determine the direction of the magnetic fields (col. 12, lines 1-63). Ritter et al. '671 also teaches using statistical plots to determine the direction of the applied magnetic field (col. 12 & 13, lines 49-67 & lines 1-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Matsutani '485 in view of Creighton et al. '934 with Ritter et al. '671. The motivation to modify Matsutani '485 in view of Creighton et al. '934 with Ritter et al. '671 would have been to provide a physician with important information about the course of the operation, as well as, providing archived data to allow the physician to make informed decisions during the operation.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellsworth Weatherby whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571) 272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW

  
ELENI MANTIS MERCADER  
SUPERVISORY PATENT EXAMINER